Greensboro - A Lifelong Learning City Executive Summary

Proposal: Creating a STEM[1] Literate Community through the <u>G</u>reensboro <u>U</u>nion of <u>I</u>nstitutions for <u>L</u>earning and <u>D</u>evelopment

The 21st century is the human capital century. As the engine of economic growth shifts from physical production to knowledge creation, good jobs….well-paying jobs…increasingly come from the production of new ideas, new knowledge, and new technologies (Moretti, 2012).   The challenge for Greensboro, NC is to shift our expectations of economic development from an emphasis on physical assets and financial capital to an emphasis on development of educational assets and human capital.

A. Our Team: The Merrick Group

Alice C. Stewart, Ph.D. – *Interim Vice Provost for Strategic Planning and Institutional Effectiveness*, Associate Professor of Strategic Management, North Carolina A&T State University. **Jacqueline A. Williams, Ph.D.** – *Associate Professor of Sales and Marketing*, School of Business and Economics, North Carolina A&T State University. **Charles E. Wilson, Ph.D.** – *Consultant, Leadership and Cross-Cultural Intelligence, Service Learning*. Formerly Assistant Director of Basic Skills and ESL Programs, GTCC. (Retired). **Angela K. Miles, Ph.D.** – *Associate Professor of Human Resource Management*, School of Business and Economics, North Carolina A&T State University. SHRM Certified.

B. Our Vision: Greensboro: A Lifelong Learning City!

What is a Lifelong Learning City? A lifelong learning city creates a culture of learning throughout the community. Learning is for all; and none are excluded. A lifelong learning city recognizes the economic return on education as seen through poverty reduction, job growth, a stimulating artistic and creative culture, an attractive downtown, and a strong economic foundation. A lifelong learning city is supported by a coalition of government, education, businesses, civic groups, and not-for-profit organizations who together bring the legitimacy, innovation, and resources that can make it a reality.   A lifelong learning city creates infrastructure and technology that frees learning from one location or type of institution and makes it inexpensive and assessable to large numbers of its citizens (Cisco Systems, 2010). A lifelong learning city supports its corporate citizens by creating the high quality human capital that is needed for economic success. We believe that a Lifelong Learning City would attract new citizens through an improved quality of life. A Lifelong Learning City would encourage civic engagement and societal problem solving. Finally, a Lifelong Learning City would enhance human capital to support economic development in Greensboro.

C. Our Broad Strategic Approach

Greensboro has the educational assets to implement this vision. The City is home to seven public or not-for-profit institutions of higher education[2].   In addition, the new Union Square project in Greensboro is an initiative to bring more educational opportunity into the Downtown

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[1] STEM - Science, Technology, Engineering, and Math

[2] North Carolina A&T State University, University of North Carolina-Greensboro, Bennett College, Greensboro College, Guilford College, and Guilford Technical Community College are the Greensboro higher education institutions. Elon University also provides a law school in the Downtown area. High Point University is within Guilford County.

area and provide common infrastructure for Greensboro's colleges and universities.   While there is already substantial investment in educational assets in Greensboro, what is lacking is an overarching coordinating mechanism that integrates these assets in a way that will provide greater and more targeted benefits to the City as a whole.

Our educational resources have the potential to have an even greater impact than they do currently. Though a large number of students matriculate to our educational assets, the linkages between the institutions themselves, and the linkages between the institutions and the needs of local employers, could be strengthened. Ironically, in a city with seven colleges and universities, Greensboro ranked 115 of 150 in a survey of "most educated cities" by WalletHub.com (News and Record, 9/18/2014 p. A3). In addition, Greensboro ranked 81 of 150 in the size of the gap between the education demanded by local job openings and the supply of workers available with the required education. (See Table 1, p. 5.)

Our larger vision and plan for Greensboro involves building upon the City's unique educational assets, as well as the new downtown campus, Union Square, to create the *Greensboro Union of Institutions for Learning and Development* (**GUILD[3]**), a not-for-profit organization whose mission is to create human capital throughout Greensboro, Guilford County and the Triad and support the goal of making Greensboro a lifelong learning city. As an analogy, if Union Square is the hardware, the GUILD is the operating system. The GUILD would provide the organizational structure to support the physical infrastructure of the Union Square initiative.

In addition to the creation of the GUILD, our larger, more comprehensive economic development plan would include investments needed from the City and Greensboro Partnership to support local technology infrastructure and to provide financial support to local citizens as they pursue ways to enhance their own personal human capital.

D. Our Proposal: The Greensboro Union of Institutions for Learning and Development (GUILD)

The *Greensboro Union of Institutions for Learning and Development* would be a not-for-profit organization that acts as a coordinating mechanism to create and deliver new learning products by facilitating collaboration among the colleges and universities in Greensboro and supporting academic entrepreneurship among their faculty.

To develop this proposal, we will first provide an analysis of the local and regional economic trends which support this proposal and the need for STEM education. Then, we will explain how the GUILD can complement the current Union Square initiative by creating learning products called Stackable Knowledge Units (SKUs). If Union Square is the hardware, and the GUILD is the operating system, SKUs are the "apps" that can be created by teams of entrepreneurial faculty. *The goal of our proposal is to demonstrate the importance and feasibility of developing a STEM-literate workforce through the creation and delivery of GUILD Stackable Knowledge Units.*

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[3] The traditional definition of a guild is "a formal group that has a common interest, or a group of craftsman or merchants with mutual interests and standards" (http://www.yourdictionary.com/guild). In the 16th century, the guilds of Florence, Italy were combined into some of the earliest "universities".

I.   Analysis of Regional and Local Economic Trends. Part of the role of GUILD would be to assist Greensboro colleges and universities in creating specialized degree and non-degree programs that fit with the value proposition of Union Square. The emerging industry clusters (aviation, specialized business services, life sciences, innovative manufacturing, and supply chain and logistics) require an emphasis on STEM-related knowledge products and would be a good fit as a complement to the health related offerings already planned for Union Square. Using data from the Brookings Institution study "The Hidden Stem Economy" (2013), we show that the distribution of STEM jobs in Greensboro will need to change if Greensboro is to have the workforce needed for the emerging industry clusters. (See Tables 2-5 and 8, p. 8-9 and 19.). In addition, data in Table 6 (p. 10) shows that the distribution of degrees awarded from Greensboro educational institutions is different than distribution of awards from other Southern STEM cities. Specifically, more master's degrees, post-baccalaureate, and post-master's certificates are awarded in areas that are preparing their citizenry for STEM jobs. Appendix 4 is a summary of the SWOT elements developed in the proposal.

II.   Creating the GUILD: Using Stackable Knowledge Units to support Lifelong Learning and a STEM-Literate City[4]**.** One conclusion that can be drawn from the data is that though Greensboro has significant educational assets, these assets are not being leveraged to match the workforce demands that are associated with the STEM-related industry clusters that are projected to drive Greensboro job creation in the next decade. Ideally, new, STEM-targeted, educational programs should complement current college and university offerings, take advantage of faculty expertise and pedagogical quality, and remain within the tradition of providing accredited, economically valuable academic degrees at a fair price. ***Unlike traditional academic programs, though, new academic offerings should reflect the multidisciplinary nature of emerging knowledge areas and provide greater choice and professional development options for students.***

Services provided by the GUILD would be available to citizens and employers of Greensboro and Guilford County and would be marketed to individuals in surrounding counties as well as prospective employers. The following is a preliminary list of the types of services that the GUILD could facilitate:

1. *Provide a one stop shop to assist citizens with choice of possible educational options.*
2. *Act as liaison and integrating mechanism to connect local college and university faculty teams with employer needs.*
3. *Provide instructional design support service for educational offerings (SKUs).*
4. *Facilitate assurance of learning data collection and feedback to faculty teams and college and university providers.*
5. *Market programs (SKUs) to existing and potential employers in Greensboro and Guilford County on behalf of the colleges and universities.*

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[4] Though this proposal focuses on STEM-related educational products from an economic development point of view, the same model could support any knowledge area for which there is sufficient interest to develop a knowledge product. A lifelong learning city would have a variety of types of courses to meet a variety of needs and interests.

What is a Stackable Knowledge Unit (SKU)?

The educational programs of the GUILD would be built on a platform concept called stackable knowledge units (SKUs). The concept of SKUs underscores the uniqueness of the GUILD and demonstrates the innovativeness of this approach. An SKU would be a coherent combination of college-level or graduate-level courses. The SKU would be based on the fastest growing type of higher education credential, the academic certificate (see Appendix 5 for certificate growth nationally and in North Carolina). Academic certificates are NOT pieces of paper received for professional development. Academic certificates are awarded as academic credentials from accredited colleges and universities. They function as "mini-degrees" and are based on and require the same rigor as any set of academic courses. Certificates, used as stackable knowledge units, can become building blocks of academic progress leading to a bachelor or master's degree. If properly articulated, SKUs offered by a Greensboro college or university via the GUILD would be accepted by any other college and university in Greensboro (or even other institutions) as academic credits toward a degree. Using SKUs would generate tuition revenue, student credit hour, and degree production for participating institutions. It would provide a portable credential and an intermediate step to a degree that increases the value of the individual's human capital.

III. Creating Academic Entrepreneurs: GUILD SKUs would be Developed and Staffed Differently than Traditional Courses and Degree Programs. To create the SKUs, we propose a *team-based approach* to the development and implementation of these certificate programs. This will provide a more fully integrated and more impactful set of coordinated and complementary courses for students. Where traditional universities have freestanding courses taught by a faculty person operating alone, the GUILD would have teams of faculty collaborating on BOTH the content and instructional design of the SKU. The GUILD starts with the assumption that one university cannot specialize in everything; therefore, in addition to combining SKUs from multiple universities, the SKU itself could be created by cross-institution teams of faculty. Sometimes the specialization would bring together unique combinations of knowledge areas. Other times the specialization would combine content experts with experts in new pedagogical methods or new delivery systems. Both of these possibilities would be valuable in developing new, employer-targeted knowledge products for emerging STEM-related fields.

Another value added element of the GUILD is that it can align faculty incentives with University and employer incentives. The GUILD fosters entrepreneurial activity of faculty who are highly trained knowledge experts. The GUILD would be a place where faculty can be rewarded for investing in developing new knowledge products that are close to the market, using cutting edge pedagogical techniques, and effectively achieving student learning outcomes. To align faculty interests with these outcomes, and to promote entrepreneurial behavior, faculty teams would receive a share of any profit (net revenue generation) resulting from an SKU. This academic entrepreneurship would be built around knowledge dissemination rather than the more traditional model of academic entrepreneurship based on knowledge creation. Another way in which the GUILD approach would be different is that if any GUILD program offering did not have enough interest or market to sustain itself financially, it would be discontinued. In the larger, detailed proposal is an outline of policies and procedures that would be necessary for successful

implementation of this proposal. The policies and procedures revolve around three areas; the expectations for development of SKUs, preliminary policies regarding the structure and staffing of SKUs, and the deliverables and proposed revenue allocation model for SKUs. (See p. 15-17 of the larger proposal.)

IV. Projected Revenue, Costs, and Breakeven for the GUILD. Appendix 6 shows a rough projection of costs associated with running the GUILD and developing and providing programs through the Union Square facility. For simplicity, the projections are based on initial offerings at the post-baccalaureate level (though a similar analysis and funding pattern would emerge for pre-baccalaureate certificates as well). Table 7 (p. 18) summarizes the results of the Breakeven Analysis. Based on these calculations, somewhere between year 5 and year 7, the GUILD would break even by offering between 18 and 21 SKUs and assuming class size of about 30 students per SKU based on tuition of $3750 per student.

V. Intended outcomes and metrics. Metrics used to evaluate the outcome of this proposal would be increased headcount for local higher education institutions, degree production, particularly of certificate degrees, increase in the number of STEM jobs in Greensboro, median earnings, per capita spending, employer satisfaction, and student satisfaction.

VI. The Benefits of Creating the GUILD: Academic Entrepreneurship. The Merrick Group believes that the GUILD emphasizes collaboration rather than competition, provides knowledge units that are consistent with institutional strengths, and creates cross disciplinary linkages via the mechanisms within the GUILD.   The GUILD has some of the benefits of the market driven for-profit segment of higher education – flexibility, ties to workforce and professional development; but unlike the for-profit institutions, the GUILD is built on the values and existing structure of the public and not-for-profit higher education assets in Greensboro and Guilford County.

Implementation of STEM programs via the GUILD provides many benefits to the City of Greensboro. Table 8 (p. 19) shows a summary of information about the percent of STEM jobs in Greensboro and the associated average wage for STEM and non-STEM positions. If Greensboro increased the number of citizens employed in STEM-related jobs only by 3%, the subsequent impact would be $37.5 million per year in additional income to Greensboro residents. The economic multiplier of this would provide an even greater impact on the overall Greensboro economy.

The GUILD provides the foundation for building Greensboro into a Lifelong Learning City. While STEM education has been the focus of this proposal, the structure of stackable knowledge units can be applied to any number of disciplinary and interdisciplinary areas. Providing intellectual stimulation, professional development, a forum for exploration of social problems, and enhancement of art and culture; all can be supported by this type of academic entrepreneurship. The GUILD can be a mechanism for ALL citizens to explore their own human potential, which is the essence of a Lifelong Learning City.